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L3: Entry 7 of 13

File: USPT

Dec 26, 2000

US-PAT-NO: 6165509

DOCUMENT-IDENTIFIER: US 6165509 A

**** See image for Certificate of Correction ****

TITLE: Pegylated drug complexed with bioadhesive polymer suitable for drug delivery and methods relating thereto

DATE-ISSUED: December 26, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hoffman; Allan S.	Seattle	WA		
Hayashi; Yoshiki	Mishima			JP

US-CL-CURRENT: 424/487; 424/488

CLAIMS:

What is claimed is:

1. A PEGylated drug complexed with a bioadhesive polymer, wherein the PEGylated drug comprises a polyethylene glycol covalently bonded to the drug, and wherein the bioadhesive polymer is selected from polyacrylic acid, polymethacrylic acid, polyethylacrylic acid and chitosan, or is a random block or graft copolymer comprising polyacrylic acid, polymethylacrylic or polychthylacrylic acid.
2. The PEGylated drug complexed with a bioadhesive polymer according to claim 1 wherein the polyethylene glycol has a molecular weight ranging from about 3 kD to about 50 kD.
3. The PEGylated drug complexed with a bioadhesive polymer according to claim 1 wherein the polyethylene glycol has a molecular weight ranging from about 5 kD to about 30 kD.
4. The PEGylated drug complexed with a bioadhesive polymer according to claim 1 wherein the polyethylene glycol has a molecular weight of about 5 kD.
5. The PEGylated drug complexed with a bioadhesive polymer according to claim 1 wherein the polyethylene glycol has a molecular weight of about 20 kD.
6. The PEGylated drug complexed with a bioadhesive polymer according to claim 1 wherein the polyethylene glycol has a molecular weight of about 40 kD.
7. The PEGylated drug complexed with a bioadhesive polymer according to claim 1 wherein the drug is a protein or a peptide.
8. The PEGylated drug complexed with a bioadhesive polymer according to claim 7 wherein the drug is a protein.
9. The PEGylated drug complexed with a bioadhesive polymer according to claim 1 wherein the drug is a hydrophobic drug.
10. The PEGylated drug complexed with a bioadhesive polymer according to claim 1

wherein the bioadhesive polymer is polyacrylic acid, polymethylacrylic or polyethylacrylic acid.

11. The PEGylated drug complexed with a bioadhesive polymer according to claim 1 wherein the bioadhesive polymer is polyacrylic acid.

12. The PEGylated drug complexed with a bioadhesive polymer according to claim 1 wherein the bioadhesive polymer is polymethylacrylic acid.

13. The PEGylated drug complexed with a bioadhesive polymer according to claim 1 wherein the bioadhesive polymer is polyethylacrylic acid.

14. The PEGylated drug complexed with a bioadhesive polymer according to claim 1 wherein the bioadhesive polymer is a random block or graft copolymer of one or more of polyacrylic acid, polymethylacrylic or polyethylacrylic acid.

15. The PEGylated drug complexed with a bioadhesive polymer according to claim 1 wherein the bioadhesive polymer is chitosan.

16. The PEGylated drug complexed with a bioadhesive polymer according to claim 1 wherein the PEGylated drug complexed with the bioadhesive polymer is stable at or below pH 4.

17. The PEGylated drug complexed with a bioadhesive polymer according to claim 1 wherein the PEGylated drug complexed with the bioadhesive polymer is stable up to about pH 7.

18. The PEGylated drug complexed with a bioadhesive polymer according to claim 1 wherein the PEGylated drug complexed with the bioadhesive polymer dissociates at or above about pH 7.

19. The PEGylated drug complexed with a bioadhesive polymer according to claim 1 in combination with free PEG, polyvinylpyrrolidone, polyacrylamide or N-alkyl derivatives thereof, or polyvinyl alcohol.

20. The PEGylated drug complexed with a bioadhesive polymer according to claim 19 wherein the free PEG has a molecular weight ranging from about 10 kD to about 500 kD.

21. The PEGylated drug complexed with a bioadhesive polymer according to claim 19 wherein the free PEG has a molecular weight ranging from about 10 kD to about 200 kD.

22. The PEGylated drug complexed with a bioadhesive polymer according to claim 19 wherein the free PEG has a molecular weight of about 18.5 kD.

23. The PEGylated drug complexed with a bioadhesive polymer according to claim 19 wherein the free polyvinylpyrrolidone has a molecular weight ranging from about 10 kD to about 500 kD.

24. The PEGylated drug complexed with a bioadhesive polymer according to claim 19 wherein the free polyvinylpyrrolidone has a molecular weight ranging from about 10 kD to about 200 kD.

25. The PEGylated drug complexed with a bioadhesive polymer according to claim 19 wherein the free polyvinylpyrrolidone has a molecular weight of about 18.5 kD.

26. The PEGylated drug complexed with a bioadhesive polymer according to claim 19 wherein the free polyacrylamide or N-alkyl derivatives thereof has a molecular weight ranging from about 10 kD to about 500 kD.

27. The PEGylated drug complexed with a bioadhesive polymer according to claim 19 wherein the polyacrylamide or N-alkyl derivatives thereof has a molecular weight ranging from about 10 kD to about 200 kD.

28. The PEGylated drug complexed with a bioadhesive polymer according to claim 19 wherein the polyacrylamide or N-alkyl derivatives thereof has a molecular weight of about 18.5 kD.
29. The PEGylated drug complexed with a bioadhesive polymer according to claim 19 wherein the free polyvinyl alcohol has a molecular weight ranging from about 10 kD to about 500 kD.
30. The PEGylated drug complexed with a bioadhesive polymer according to claim 19 wherein the free polyvinyl alcohol has a molecular weight ranging from about 10 kD to about 200 kD.
31. The PEGylated drug complexed with a bioadhesive polymer according to claim 19 wherein the free polyvinyl alcohol has a molecular weight of about 18.5 kD.
32. A method of delivering a drug to a body fluid or mucosal tissue comprising contacting the body fluid or mucosal tissue with the PEGylated drug complexed with a bioadhesive polymer according to claim 1.
33. The method of delivering a drug according to claim 32 wherein the body fluid or mucosal tissue is fluid or tissue of the alimentary tract.
34. The method of delivering a drug according to claim 32 wherein the body fluid or mucosal tissue is fluid or tissue of the respiratory tract.
35. The method of delivering a drug according to claim 32 wherein the body fluid or mucosal tissue is fluid or tissue of the eye, nose, vagina, lung, mouth, or throat.
36. The method of delivering a drug according to claim 32 wherein the body fluid or mucosal tissue is fluid or tissue of an open wound.

WEST[Generate Collection](#)[Print](#)**Search Results - Record(s) 1 through 13 of 13 returned.**☐ 1. Document ID: US 6548171 B1

L3: Entry 1 of 13

File: USPT

Apr 15, 2003

US-PAT-NO: 6548171

DOCUMENT-IDENTIFIER: US 6548171 B1

TITLE: Fluorescent nanocrystal-embedded microspheres for fluorescence analyses

DATE-ISSUED: April 15, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Barbera-Guillem; Emilio	Powell	OH	43065	
Castro; Stephanie L.	Columbus	OH	43230	

US-CL-CURRENT: 428/402.24; 428/402, 428/403, 428/404, 428/407, 436/523, 436/533, 523/200, 523/201

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KIMC
Draw Desc	Image										

☐ 2. Document ID: US 6515016 B2

L3: Entry 2 of 13

File: USPT

Feb 4, 2003

US-PAT-NO: 6515016

DOCUMENT-IDENTIFIER: US 6515016 B2

TITLE: Composition and methods of paclitaxel for treating psoriasis

DATE-ISSUED: February 4, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hunter; William L.	Vancouver			CA

US-CL-CURRENT: 514/449

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KIMC
Draw Desc	Image										

☐ 3. Document ID: US 6495579 B1

L3: Entry 3 of 13

File: USPT

Dec 17, 2002

US-PAT-NO: 6495579

DOCUMENT-IDENTIFIER: US 6495579 B1

TITLE: Method for treating multiple sclerosis

DATE-ISSUED: December 17, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hunter; William L.	Vancouver			CA

US-CL-CURRENT: 514/365

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWMC
Drawn Desc	Image										

☐ 4. Document ID: US 6383811 B2

L3: Entry 4 of 13

File: USPT

May 7, 2002

US-PAT-NO: 6383811

DOCUMENT-IDENTIFIER: US 6383811 B2

TITLE: Polyampholytes for delivering polyions to a cell

DATE-ISSUED: May 7, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Wolff; Jon A.	Madison	WI		
Hagstrom; James E.	Middleton	WI		
Budker; Vladimir G.	Middleton	WI		
Trubetskoy; Vladimir S.	Madison	WI		

US-CL-CURRENT: 435/450; 435/458, 514/44

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWMC
Drawn Desc	Image										

☐ 5. Document ID: US 6333347 B1

L3: Entry 5 of 13

File: USPT

Dec 25, 2001

US-PAT-NO: 6333347

DOCUMENT-IDENTIFIER: US 6333347 B1

TITLE: Intrapericardial delivery of anti-microtubule agents

DATE-ISSUED: December 25, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hunter; William L.	Vancouver			CA
March; Keith L.	Indianapolis	IN		

US-CL-CURRENT: 514/449

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
Draw Desc	Image								

K00C

☐ 6. Document ID: US 6309701 B1

L3: Entry 6 of 13

File: USPT

Oct 30, 2001

US-PAT-NO: 6309701

DOCUMENT-IDENTIFIER: US 6309701 B1

TITLE: Fluorescent nanocrystal-labeled microspheres for fluorescence analyses

DATE-ISSUED: October 30, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Barbera-Guillem; Emilio	Powell	OH		

US-CL-CURRENT: 427/213.3; 257/614, 257/642, 257/65, 424/9.1, 424/9.32, 424/9.36,
424/9.42, 424/9.6, 427/214, 427/215, 427/220, 428/402.24, 428/404

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
Draw Desc	Image								

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☐ 7. Document ID: US 6165509 A

L3: Entry 7 of 13

File: USPT

Dec 26, 2000

US-PAT-NO: 6165509

DOCUMENT-IDENTIFIER: US 6165509 A

**** See image for Certificate of Correction ****TITLE: Pegylated drug complexed with bioadhesive polymer suitable for drug delivery and methods relating thereto

DATE-ISSUED: December 26, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hoffman; Allan S.	Seattle	WA		
Hayashi; Yoshiki	Mishima			JP

US-CL-CURRENT: 424/487; 424/488

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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K00C

☐ 8. Document ID: US 5397848 A

L3: Entry 8 of 13

File: USPT

Mar 14, 1995

US-PAT-NO: 5397848

DOCUMENT-IDENTIFIER: US 5397848 A

TITLE: Enhancing the hydrophilicity of silicone polymers

DATE-ISSUED: March 14, 1995

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Yang; Shin-Liang S.	Laguna Hills	CA		
Gerace; John D.	Laguna Niguel	CA		

US-CL-CURRENT: 525/477; 351/160H, 523/106, 523/107, 525/478

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KMIC
Draw Desc	Image									

☐ 9. Document ID: US 5330759 A

L3: Entry 9 of 13

File: USPT

Jul 19, 1994

US-PAT-NO: 5330759

DOCUMENT-IDENTIFIER: US 5330759 A

TITLE: Enteric coated soft capsules and method of preparation thereof

DATE-ISSUED: July 19, 1994

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Pagay; Shrikant N.	Guilderland	NY		
Stetsko; Gregg	Bethlehem	NY		

US-CL-CURRENT: 424/462; 424/452, 424/463

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KMIC
Draw Desc	Image									

☐ 10. Document ID: US 4775536 A

L3: Entry 10 of 13

File: USPT

Oct 4, 1988

US-PAT-NO: 4775536

DOCUMENT-IDENTIFIER: US 4775536 A

TITLE: Enteric coated tablet and process for making

DATE-ISSUED: October 4, 1988

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Patell; Mahesh K.	Edison	NJ		

US-CL-CURRENT: 424/471; 424/480, 424/482, 427/2.19

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KIMC
Draw Desc	Image									

☐ 11. Document ID: US 4033817 A

L3: Entry 11 of 13

File: USPT

Jul 5, 1977

US-PAT-NO: 4033817

DOCUMENT-IDENTIFIER: US 4033817 A

TITLE: Pressure-driven enzyme-coupled membranes

DATE-ISSUED: July 5, 1977

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gregor; Harry P.	Leonia	NJ	07605	

US-CL-CURRENT: 435/44; 435/175, 435/179, 435/181, 435/262, 435/297.2, 435/94, 435/99

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KIMC
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☐ 12. Document ID: US 3897412 A

L3: Entry 12 of 13

File: USPT

Jul 29, 1975

US-PAT-NO: 3897412

DOCUMENT-IDENTIFIER: US 3897412 A

**** See image for Certificate of Correction ****

TITLE: Paromomycin antibiotic derivatives

DATE-ISSUED: July 29, 1975

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Naito; Takayuki	Tokyo			JA
Nakagawa; Susumu	Tokyo			JA

US-CL-CURRENT: 536/13.3

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KIMC
Draw Desc	Image									

☐ 13. Document ID: US 6165509 A

L3: Entry 13 of 13

File: DWPI

Dec 26, 2000

DERWENT-ACC-NO: 2001-136573

DERWENT-WEEK: 200114

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TITLE: PEGylated drug complexed with a bioadhesive polymer useful for sustained release delivery of drug to body fluid or mucosal tissue of the alimentary tract, respiratory tract, eye, nose, vagina, lung, mouth or open wounds

INVENTOR: HAYASHI, Y; HOFFMAN, A S

PRIORITY-DATA: 1998US-0145062 (September 1, 1998)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
US 6165509 A	December 26, 2000		020	A61K047/34

INT-CL (IPC): A61 K 47/32; A61 K 47/34

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	KMC
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